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Responsive Web Design



Infographic by DCI (dotcominfoway.com).

By Heather Widener and Jody Allen
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Introduction

In the fall of 2012, the Virginia Foundation for the Humanities hosted their annual [edUi Conference](#) – a conference for web professionals serving colleges, universities, libraries, museums, and beyond. There were several sessions on Responsive Web Design. Jason Cranford Teague led one of these, entitled “Responsive First.” As VAM’s communications director, I decided to attend. While I am no web designer or programmer, part of my job is to work with our association management company on the VAM website, and to act as webmaster to keep the site updated. In other words, while I could never build a website myself, I need to understand the ins and outs of trends and developments in web technology so that I can make the right decisions and recommendations for our organization as we plan for technology upgrades. Jason reminded us that “Context is king.” We must not only consider the content that the user is “consuming” on our website, but where and how that user will be working. The session was a fantastic introduction to responsive web design and its importance to anyone working with or making decisions about web sites today. – Heather Widener, communications director, VAM

What is Responsive Web Design?

To put it simply, responsive design is a way a web site can be designed where the design will adapt to the screen it is being viewed on. A website that is responsively designed will appear differently on a PC monitor, a tablet, and a smartphone. According to our edUi speaker, responsive design optimizes content and functionality to meet the needs of the medium. (Teague, J.C. (2012, September 26).

Responsive First: Planning Experiences That Scale. JasonSpeaking.com. Retrieved 06/10/13 at [JasonSpeaking.com](#))

Conversely, traditional websites are designed with a “fixed” design. These don’t adapt to variations in screen size. This results in difficulty for the user who is trying to view the site on a tablet or smartphone device. The site may require a lot of scrolling, or content might be reduced so much in size as to make it indecipherable. It is important to remember, when considering responsive design, that we must let go of the idea that our website can only *look one way*. It doesn’t. Instead, responsively designed websites *scale* to meet the needs of the viewing environment (screen size, browser, connection speed, etc.). If you have access to a tablet, a PC, and a smart phone, test this out by visiting the [Boston Globe](#) website (to name just one of the rapidly growing number that are responsively designed) on each device. While it is clearly still “branded,” the content is not presented identically in each environment. Instead, the content adapts to its context, thereby augmenting the user experience. How does responsive design accomplish this? According to Mashable, “...a responsive web design uses 'media queries' to figure out

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what resolution of device it's being served on. Flexible images and fluid grids then size correctly to fit the screen." (Cashmore, P. (2012, December 11). *Why 2013 Is the Year of Responsive Web Design*. Mashable.com. Retrieved, 06/06/13 at Mashable.com)

Clear as mud? Well, if you've ever tried to view a site that is not responsively designed on your smart phone (*ahem*, for now, you can try [VAM's current site](#) – but never fear – we are working toward a responsive design!), then you know how difficult it is to try to get (*see!*) the information you need. If, on the other hand, you have experienced a responsively designed site, you know that the user experience is much friendlier and less frustrating – and you know that you'll spend a lot longer visiting that site with a smile on your face, not grumbling under your breath but rather accessing the information you need.

Why Should I Care About Responsive Web Design?

Managers of web content and those who examine analytics have noticed a shift in the habits of those who consume digital media. Specifically, the context in which an online audience is viewing digital content is changing, and it's becoming mobile. According to Mashable, tablet sales are expected to exceed 100 million this year, while at the same time 2012 was the first year (since 2001) in which PC sales were lower than they were the year before. Then of course there are smart phones. Over half of Americans now use a smartphone or tablet device to access the web. (Cashmore, P. (2012, December 11). *Why 2013 Is the Year of Responsive Web Design*. Mashable.com. Retrieved, 06/06/13 at Mashable.com)

Because responsive design allows publishers to reach readers across multiple devices, it allows your ONE site to be accessed on multiple devices. Because responsive design targets the media rather than being device-specific (such as mobile websites or mobile sub-domains), it works across the ever-widening array of platforms available. The other advantage that becomes obvious to anyone charged with updating their organization's website is that a responsively designed site is just that – ONE site. Organizations with mobile websites will have to update both their "regular" website and their mobile site each time a content update is needed. And if that doesn't convince you to consider a responsively designed website, consider that responsive design is Google-recommended, and by 2015 a multi-screen solution will be a necessity for all websites. Analysts believe the mobile web will be bigger than desktop Internet use by 2015. (O'Dell, J. (2010, April 13). *New Study Shows the Mobile Web Will Rule by 2015 [STATS]*. Mashable.com. Retrieved, 06/13/13 at Mashable.com)

Using Web Analytics to Inform Planning

If you have read this far into this white paper, you are probably familiar with web analytics and likely use Google Analytics to track visitation to your museums' website. Analytics can be confusing, but for all the options, charts, and graphs, the power of the information available through analytics is nothing short of

staggering. What to know what cities most of your web visitors hail from? No problem. What language they speak? How many seconds they spend on the web page that describes your summer camp program? What browsers they prefer? Check. Check. Check.

If you are considering a responsively designed site, or are planning ahead for technology upgrades over a 3 – 5 year timeframe, you must pay attention to analytics. Analytics will tell you what devices your online audiences are using. For example, from Jan. 1, 2013 – June 1, 2013, nearly 1,000 visited the VAM site on an Android mobile device, compared with 364 Android based visits over the six months ending in January 2012. Although, for our site, the numbers of users accessing on tablets and mobile phones is still small, the exponential rate of change is clear. Add to that the wide variety of devices being used to access a site, and the relevance of having a website that is “friendly” to all those devices becomes clear. For example, a quick glance at Google Analytics tells us that the VAM site was viewed on *157 different mobile devices* from January – June 2013. How many different devices are accessing your museum’s website, and how does the site look to each of those users?

What About Apps?

While apps (short for applications) are very popular and potentially offer a solution to the issue of website usability for various devices, people usually use apps not so much for an overall internet browsing experience (as they do a website) but more for a specific purpose, such as banking, finding the closest coffee shop, or playing a game. For example, the calculator and stop watch on my phone are apps. They expand my device’s usefulness by performing a specific function. (Pattison, J. (2013, June 6). *When is a Mobile App Appropriate?* Eduiconf.org. Retrieved June 7, 2013, from Eduiconf.org.)

One of VAM’s 2013 conference sponsors, TourSphere CEO Rob Pyles knows the world of apps. According to Rob, many museums employ apps for way finding, as an alternate way to experience an exhibit or take a specialized tour (think cell phone tour, only bolstered). They can even be used to experience the museum in a completely new and unconventional way, such as in TourSphere’s game, “[Murder at the Met: An American Art Mystery](#).” Again, by and large, apps are used for more specific purposes than are websites. Websites are your organization’s online portal to the world, whereas your organization’s app might offer a fun, specialized insight into a particularly compelling aspect of your collections. For example, [Wild @ Art](#) is a *native app* (available both as an iOS and an Android app) that explores parts of the Virginia Museum of Fine Arts’ collections in new and engaging ways.

Wait, Did You Say “Native?”

There are two types of apps. You are probably most familiar with native apps. They are tied to the type of device we own, and as users we periodically get prompted to download an update to our app. Native apps can be beneficial for museums located in out of the way places with spotty or limited internet and

cell phone reception. The app gets downloaded and then used – it is not constantly accessing the web. For developers, native apps require development of various versions of the app for various types of devices (i.e., iOS vs. Android). This equates to a more expensive app that requires more maintenance.

The other type of app, which is rapidly gaining in popularity, is the web app. A web app is an app that is web-based and does not require the user to download upgrades. It also depends on connectivity to the web. For developers, these are easier to create and don't require updating the way native apps do. An edit made to a web app is similar to an edit made to a web page. The user is not asked to then update the app that "lives" on their phone or tablet device. Web apps are fantastic choices if your museum has no problems with internet connectivity and if budget or time is tight. A web app does not need to go through the app review and approval process that native apps do (for example, after creating an app for iOS devices, that app must be submitted to the App Store for review and approval before it can be made available to users. This adds a step that requires time and expense.)

Summary & Resources for Further Exploration

In summary, the future is mobile, and as a museum professional charged with keeping pace with the technological trends of your online audience, mobile trends and responsive design are not things that can be ignored. Knowing a bit about how your website works currently and who is viewing it, how they are viewing it, and on what device(s) they are viewing it will give you insights to help you stay (or become) nimble tomorrow and beyond. In the meantime, here are a few resources for you:

- Tinkering with RWD: This website allows you to "plug in" URLs from responsively designed websites to see what those websites look like on various screens. Type in the URL below, then add "#/WEBSITENAME" to the end of the URL to view that WEBSITE NAME on a variety of devices. Try Mashable.com and Bostonglobe.com. Then try your museum's site.
<http://www.finecitizens.com/defineresponsive/>
- To get an even greater range of device size previews for any website you plug in, try <http://screenqueri.es/>. This site covers a huge number of devices.
- 10 Infographics for Learning about Responsive Design:
<http://designinstruct.com/roundups/infographics-learn-responsive-web-design/>
- Three Nonprofits Pioneering Responsive Web Design:
<http://nonprofitorgs.wordpress.com/2012/10/08/three-nonprofits-pioneering-responsive-web-design/>